

Supplemental Material

A Targeted Health Risk Assessment Following the *Deepwater Horizon* Oil Spill: Polycyclic Aromatic Hydrocarbon Exposure in Vietnamese-American Shrimp Consumers

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Figure S1. Male and female survey respondent bodyweight.

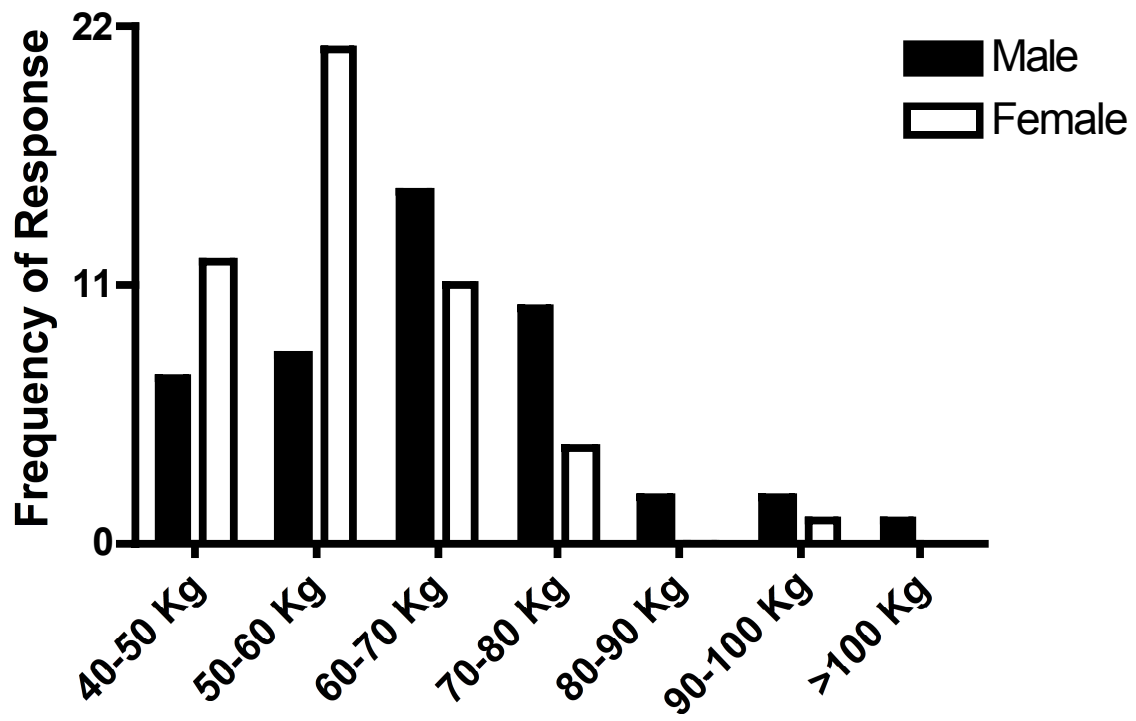


Figure S2. Common shrimp cooking methods among survey respondents.

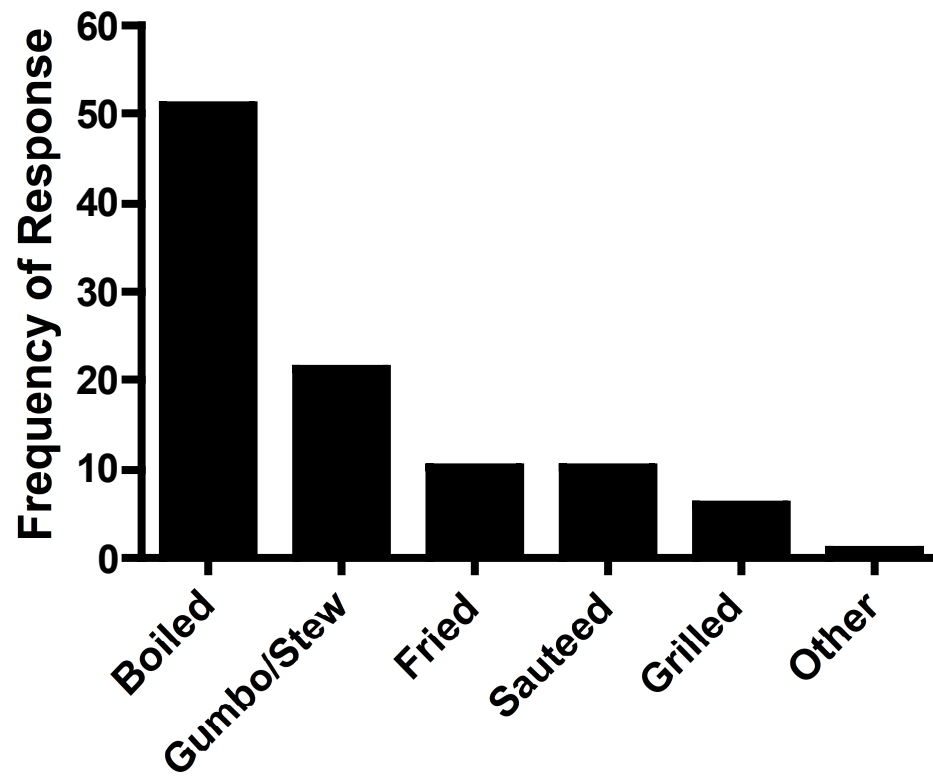


Figure S3. Shrimp size consumed among respondents.

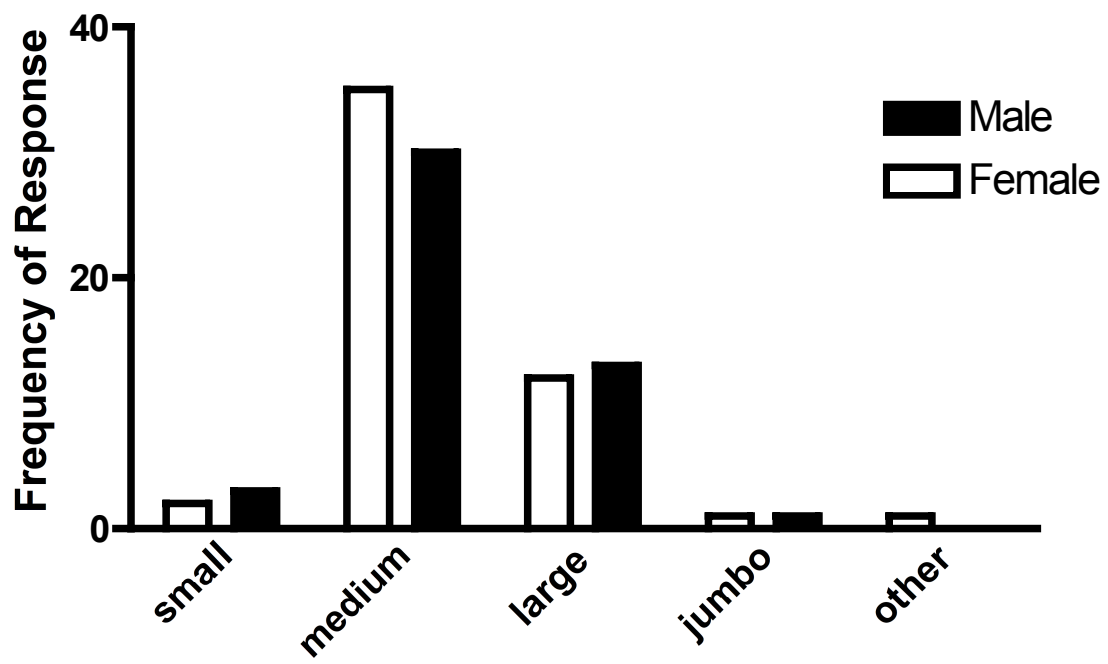
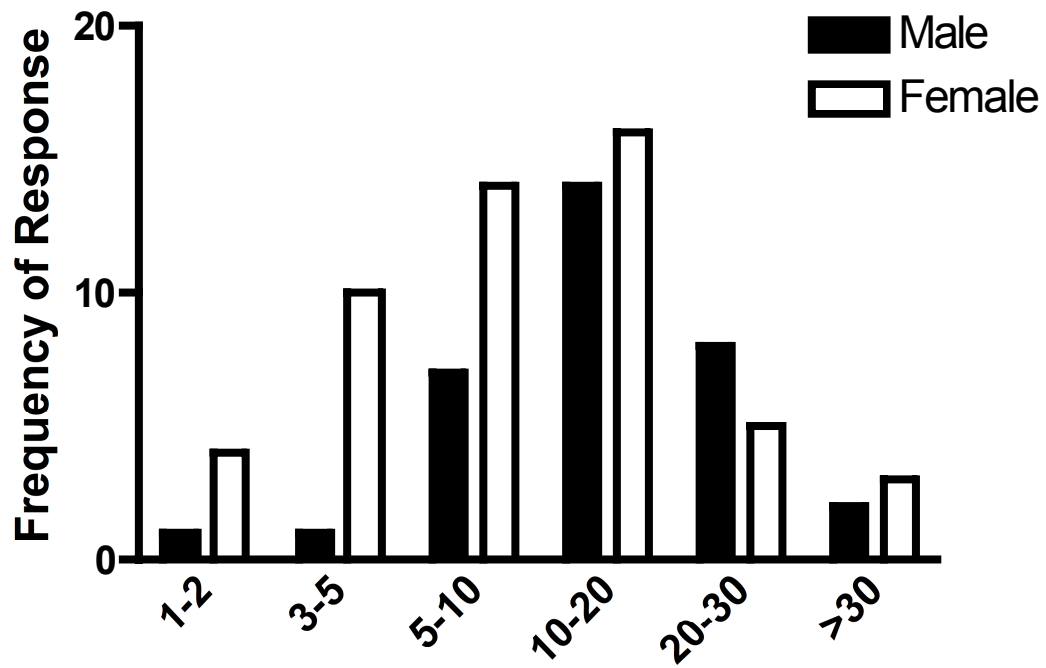


Figure S4. Number of shrimp consumed per meal among respondents.



List of all PAH analytes included in chemical analysis

Naphthalene, Dibenzofuran, Phenanthrene, Pyrene, Biphenyl, C1-Naphthalenes, Fluorene, Fluoranthene, C2-Naphthalenes, Perylene, Dibenzothiophene, Carbazole, C1-Phenanthrenes/Anthracenes, Anthracene, C1-Dibenzothiophenes, Acenaphthene, cis/trans Decalin, C1-Decalins, C2-Decalins, C3-Decalins, C4-Decalins, C3-Naphthalenes, C4-Naphthalenes, Benzothiophene, C1-Benzothiophenes, C2-Benzothiophenes, C3-Benzothiophenes, C4-Benzothiophenes, Acenaphthylene, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes, C4-Phenanthrenes/Anthracenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4-Dibenzothiophenes, C1-Fluoranthenes/Pyrenes, C2-Fluoranthenes/Pyrenes, C3-Fluoranthenes/Pyrenes, C4-Fluoranthenes/Pyrenes, Naphthobenzothiophene, C1-Naphthobenzothiophenes, C2-Naphthobenzothiophenes, C3-Naphthobenzothiophenes, C4-Naphthobenzothiophenes, Benz(a)anthracene, Chrysene/Triphenylene, C1-Chrysenes, C2-Chrysenes, C3-Chrysenes, C4-Chrysenes, Benzo(b)fluoranthene, Benzo(k,j)fluoranthene, Benzo(a)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylnaphthalene, 1-Methylnaphthalene, 2,6-Dimethylnaphthalene, 3-Methylphenanthrene, 2/4-Methylphenanthrene, 9-Methylphenanthrene, 1-Methylphenanthrene, 4-Methyldibenzothiophene, 1-Methyldibenzothiophene, 1,6,7-Trimethylnaphthalene, 1-Methylfluorene, 2/3-Methyldibenzothiophene, 2-Methylanthracene, 3,6-Dimethylphenanthrene, Retene, 2-Methylfluoranthene, Benzo(b)fluorine, C29-Hopane, 18a-Oleanane, C30-Hopane

Table S1. Commercial size classifications of shrimp and corresponding weight ranges.

Size	Number of shrimp/lb	Number of shrimp/kg	Number of shrimp/g
Small	50-60	110-132	0.110-0.132
Medium	42-50	92-110	0.092-0.110
Large	30-35	66-77	0.066-0.077
Jumbo	20-25	44-55	0.044-0.055

Table S2. Consumption frequency categories among survey respondents.

Reported consumption	# Shrimp meals/ 30 days (1 month)
Daily shrimp meal	30 shrimp meals/30 days
Several shrimp meals/week	14 shrimp meals/30 days
One shrimp meal/week	4 shrimp meals/30 days
Several shrimp meals/month	2 shrimp meals/30 days
One shrimp meal/month	1 shrimp meal/30 days
Less than one shrimp meal/month	0.5 shrimp meals/30 days

Table S3. Relative potency factors for carcinogenic PAHs used by the USEPA and the USFDA for health risk assessments. Benzo[a]pyrene is considered the index PAH.

PAH	Relative potency factors for cPAHs^a
Benzo[a]anthracene	0.1
Chrysene	0.001
Benzo[b]fluoranthene	0.1
Benzo[k]fluoranthene	0.01
Benzo[a]pyrene	1
Indeno[1,2,3-c,d]pyrene	0.1
Dibenzo[a,h]anthracene	1

^aCollins et al. 1998; USEPA 1993.

Table S4. Respondent demographics.

Characteristic	Males	Females	Females of child bearing age
Average age	49.4 years	50.5 years	34.5 years
Age range	28-76 years	26-74 years	26-43 years
Average bodyweight	67.5 kg	58.9 kg	57.8 kg
Body weight range	45-113 kg	40-92 kg	40-72.5 kg
Number of respondents	49	64	15

References

- Collins JF, Brown JP, Alexeeff GV, Salmon AG. 1998. Potency equivalency factors for some polycyclic aromatic hydrocarbons and polycyclic aromatic hydrocarbon derivatives. *Regulatory toxicology and pharmacology* : RTP 28:45-54.
- USEPA. 1993. Provisional guidance for quantative risk assessment of polycyclic aromatic hydrocarbons. Washington D.C.